

#4. Eastern Pacific.

D-4703 - 4739

Dec. 27<sup>th</sup>. 1904. to Feb. 6, 1905.



N<sup>o</sup> 4.

Dr. 4703. - Dr.

Hy. 4519

next Hyd. 4519 Jan'y 10, '05

" " 4520 — 11 —

" " 4521 — 11 —

" " 4522

" " 4524

" " 4525

" " 4526

" " 4527

1902, 8  
1906, 11  
23/

8 am

Long - 91° 06.4' W  
Lat. - 1° 30.9' S.



DeLong;

No. 4703 Dr. Date 27 Dec. 1904  
 Lucas Machine. Reel. Lucas  
 Turns Cor.+ Depth 2228 fath.  
 Shot or lead 60<sup>lb</sup> and telegraph tubes  
 Bottom red clay.  
 Bottom temperature 35.8°  
 No. of thermometer 108026 Cor. 5  
 Corrected temperature 35.3  
 Air 72° Surface 73° Drift  
 Trawl or dredge. Intermediate as before.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
AM			AM	
8-0-40	8-51-05	0	8-57-40	9-44-45
1-35	50-00	100	9-00-25	41-00
2-25	48-55	200	3-30	37-10
3-15	47-55	300	6-35	33-30
4-10	46-55	400	9-9-50	9-30-0
5-10	45-50	500		
6-10	44-50	600		
7-05	43-50	700		
8-00	42-45	800		
9-00	41-40	900		
10-00	40-35	1000		
11-05	39-25	1100		
12-05	38-20	1200		
13-05	37-10	1300		
14-10	36-00	1400		
15-10	34-45	1500		
16-15	33-35	1600		
17-20	32-20	1700		
18-30	31-05	1800		
19-35	29-50	1900		
20-40	28-35	2000		
21-50	27-15	2100		
23-00	26-00	2200		
		2228		
8-23-15	8-25-20	2300		
		2400		

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0 2500		
		100 2600		
		200 2700		
		300 2800		
		400 2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

### REMARKS:

Cloudy  
 Light Breeze E.S.E.  
 Smooth Sea  
 Bar 29.98  
 Ther. Att 78°  
 Drifting Course N.E.

18.6  
 Lat. 17 22 48 S  
 Long. 100 58 54 W  
 52.3

No. Dr 4703. Cont'd Date 27 Dec. 1904

Machine. Reel.

Turns Cor.+ Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer Cor.


Corrected temperature

Air Surface Drift N.E., 5.2 m.

Trawl or dredge 8 ft. Tanner as before.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN. AM	UP. PM
		0	9-49-15	1-57.00
		100	52-30	53.00
		200	55-40	49.30
		300	58-55	46.20
		400	10-1-35	43.00
		500	5-20	39.40
		600	8-50	36.05
		700	12-16	32.40
		800	15-25	29.10
		900	18-40	25.45
		1000	21-55	22.20
		1100	25-15	18.50
* Let watch ahead 77 min		1200	* 35-30	15.10
		1300	39-50	10.45
		1400	43-00	07.20
		1500	46-00	03.45
		1600	49-20	1.00.15
		1700	52-25	56.30
		1800	55-30	53.10
		1900	58-45	49.30
		2000	11-02-20	45.30
		2100	5-20	41.30
		2200	8-30	36.30
		2300	12-30	30.20
		2400	11-16-00	12-25.10

96.00  
76.20

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
11-19-10		2500		12.19.15
22-40		2600		13.00
26-10		2700		12.07.20
11-29-30		2800		11:59.35
		2900	= 30 min	dredging.
Lat. 17°18'36" S.		3000		
Long. 100°52'18" W.		3100		
Fair		3200		
Lt. br. from ESE		3300		
Moderate Sea.		3400		
Bar. 29.95		3500		
Therm. at 80°		3600		
Course, N.E.		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:



507  
Veith

P.L. 61.2 (7-15 P.M.)

11-1023

No. *Dr. 4704* Date *27 Dec. 04*

Machine. Reel.

Turns Cor.+ Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer Cor.

Corrected temperature

Air *73°* Surface *73°* Drift *NNE 0.3 mile.*

Trawl or dredge *Surface Haul*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>4 1/2 Surface Net with electric light attached towing from port boom</i>		0		
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		
<i>2 Kofoid Nets towing from stern</i>				

*No Sounding*

*P. M.*

*Out In*

*7-15-00 8-05-00*

*7-45*

*Towing 20 minutes*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

#### REMARKS:

*Cloudy. - Mod. sea.*  
*South breeze from ENE*  
*Barometer 29.91'*  
*Therm attached 78*

*Position*  
*Lat. 16° 55.3' S.*  
*Long. 100° 24.6' W.*

No. Dr. 4705 Date 28 Dec '04

Lucas Machine. Reel. Lucas

Turns Cor.+ Depth 2031 fms

Shot or lead 60 lbs. + Telson. Tube

Bottom very bk. yel. fm. Yel. O.

Bottom temperature 35.8°

No. of thermometer 108026 Cor. 5

Corrected temperature 30.3

Air 75° Surface 72° Drift

Trawl or dredge Intermediate Haul

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
8-04-00	8-00-00	0	0-51-30	1-2-00
5-00		100	5-20	1-0
6-20		200	58-30	2-1
		300	10-1-40	1-1
8-10		400	7-33	2-1
9-00		500	7-30	11-3
9-55		600	10-30	
10-55		700	14-05	
11-50		800	17-25	1-21
12-50		900	20-35	
13-50	40-05	1000	23-55	2
14-50	39-00	1100	32-10	3
15-50	37-50	1200	31	44
16-55	36-40	1300	37-15	
18-00	35-30	1400	42-50	
19-00	34-15	1500	41-00	
20-05	32-55	1600	40-20	17
21-10	31-40	1700	52-50	
22-15	30-25	1800	53-10	1
23-20	29-00	1900	58-45	16-4
24-00	27-00	2000	11-00	12-10
8-25-00	8-27-10	2031		
		2100	5-50	8-30
		2200	9-20	-4-30
		2300	12-30	12-0-20
		2400	16-40	11-56-10

Drift of ship while sounding WNW

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN. <i>Am</i>	UP.
		2500	11-21-30	11-52-00
		2600	11-25-30	11-46-00
		2700	<i>Dredged bottom.</i>	
		2800		
		2900	<i>Intermediate Haul</i>	
		3000	18-57-00	9-46-00
		3100	9-00-50	
		3200	04-15	38-20
		3300	07-35	34-30
		3400	9-11-00	9-31-00
		3500		
		3600	<i>5' Cone (Bobbinette) Net</i>	
		3700	<i>and 2 Koloids</i>	
		3800		
		3900	<i>with 400 fms. cable,</i>	
		4000	<i>Course N.E.</i>	

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

#### REMARKS:

*Position*  
*Lat. 18° 15' N. E.*  
*Long. 101° 10' W.*  
*(noon)*  
*Barometer 29.93*  
*Therm. alt. 77°*  
*Dredging course N.E.*

No. *Dr. 4706.* Date *28 Dec. 1904.*

Machine. Reel.

Turns Cor.+ Depth

Shot or lead

Bottom *No Sounding.*

Bottom temperature

No. of thermometer Cor.

Corrected temperature

Air *73°* Surface *72°* Drift

Trawl or dredge *Surface tow as before.*

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

Lat. *14° 18' 42" S.*

Long. *98° 45' 48" W.*

*Cloudy.*

*Lt. to gentle br., E by S.*

*Moderate Sea.*

*Bar. 29.91*

*Therm. at. 78°*

*Course, N. 24° E.*

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

*7:48:30*

*8:08.30*

*= Towing 20 min.*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500 <sup>N</sup>				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

P. L. = 44.3

11-1023

507

No. *Dr. 4707*. Date *29 Dec. 04.*Machine. *Lucas* Reel. *Lucas*Turns Cor.+ Depth *2/20 fms.*Shot or lead *60 lb. J.C.T.*Bottom *rd. C.*Bottom temperature *35.8°*No. of thermometer *108026* Cor. *5*Corrected temperature *35.3*Air *73°* Surface *72°* DriftTrawl or dredge *Intermediate as before.*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>7:00.00</i>	<i>8:57.15</i>	0	<i>8:57.45</i>	<i>9:46.45</i>
<i>05.20</i>	<i>50.15</i>	100	<i>9:02.00</i>	<i>42.45</i>
<i>06.05</i>	<i>49.55</i>	200	<i>05.30</i>	<i>40.20</i>
<i>06.50</i>	<i>49.00</i>	300	<i>08.50</i>	<i>36.25</i>
<i>08.05</i>	<i>48.05</i>	400	<i>9:12.10</i>	<i>0.32.45</i>
<i>09.15</i>	<i>47.05</i>	500	<i>Towing</i>	<i>20 1/2 m.</i>
<i>10.15</i>	<i>46.10</i>	600		
<i>11.05</i>	<i>45.10</i>	700	<i>Lat. 12-53-10 S</i>	
<i>12.10</i>	<i>44.10</i>	800	<i>Long. 97-42-00 W</i>	
<i>13.00</i>	<i>43.10</i>	900	<i>Cloudy</i>	
<i>14.05</i>	<i>42.10</i>	1000	<i>Antilla breeze, ESE</i>	
<i>15.00</i>	<i>41.05</i>	1100	<i>Modern Sea.</i>	
<i>16.00</i>	<i>40.00</i>	1200	<i>Bar. 29.97</i>	
<i>17.00</i>	<i>38.45</i>	1300	<i>therm. at 78°</i>	
<i>18.05</i>	<i>37.05</i>	1400	<i>Cruiser, N 1/2 E.</i>	
<i>19.10</i>	<i>36.00</i>	1500		
<i>20.10</i>	<i>34.45</i>	1600		
<i>21.10</i>	<i>33.25</i>	1700		
<i>22.15</i>	<i>32.15</i>	1800		
<i>23.20</i>	<i>31.00</i>	1900		
<i>24.20</i>	<i>29.30</i>	2000		
<i>25.30</i>	<i>28.05</i>	2100		
<i>8:25.40</i>	<i>8:27.45</i>	<i>2120</i>		
		2200		
		2300		
		2400		

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
<i>Surf.</i>	72.0	104922	-0.3	72.7
125	72.7	1081025	-0.2	72.5
50	70.0	108151	-0.2	69.8
100	57.2	108154	-0.5	56.7
200	49.8	104924	-0.6	49.2
300	45.8	104914	-0.7	45.1
400	42.6	109635	-0.4	42.2
500				
600	39.7	108156	-0.6	39.1
700				
800	38.1	108155	-0.8	37.3
900	Sinker with cup and a little therm.			
1000	at end of wire.			

11-1023

#### REMARKS:

Started to lower at 9:50 am  
 900 fms down at 10:14.15.  
 Started to raise at 10:19.45.  
 Up at 10:44.00.



No. Dr. 4708

Date 29 Dec. '04

Machine.

Reel.

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air

73°

Surface

72°

Drift

Trawl or dredge

Surface Haul

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
5' Con. Shot		0	(P. 11)	
10' Con. Shot		100		
20' Con. Shot		200	Out	In
30' Con. Shot		300	7-45	8-15
40' Con. Shot		400		
50' Con. Shot		500	Time	Time
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Pos:

Lat. 11° 40' S. ✓

Long. 96° 55' W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

#### REMARKS:

*Sp. to gentle breeze from  
Barom. 29.92'  
Therm. attached 78°*

No. *Dr.* 4709 . Date 30 Dec. '04  
*Lucas* Machine. Reel. *Lucas*  
 Turns Cor.+ Depth 2035 fms.  
 Shot ~~or lead~~ 60 lbs. & Tulege Tube  
 Bottom glob. Oz.  
 Bottom temperature 35.8°  
 No. of thermometer 108026 Cor. 5  
 Corrected temperature 35.3  
 Air 72° Surface 72° Drift 1/2 mile N-E.  
 Trawl or dredge *Lucas*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
8-03-55	8-48-35	0	9-52-30	2-21-20
04-40	47-35	100	56-00	18-10
05-30	46-40	200	59-10	13-55
06-15	45-45	300	10-2-30	10-35
07-05	44-45	400	6-00	7-20
07-55	43-45	500	9-20	4-05
08-50	42-45	600	12-35	2-01-15
40	41-45	700	16-00	57-45
10-35	40-40	800	19-20	54-10
11-30	39-40	900	22-35	50-20
12-30	38-35	1000	25-55	46-45
13-30	37-30	1100	34-05	43-15
14-30	36-20	1200	37-15	39-25
15-30	35-10	1300	40-30	36-50
	34-05	1400	43-50	33-25
17		1500	46-55	30-00
18-40	31-30	1600	49-35	26-45
19-45	30-10	1700	52-50	23-20
20-45	28-50	1800	56-00	19-40
	27-50	1900	* 11-00-25	16-00
23-00	26-05	2000	04-10	11-55
8-23-30	8-25-30	2035	07-40	7-30
		2100	11-10	1-03-00
		2200	14-35	58-50
		2300		
		2400	11-18-10	11-04-40

Ex S.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500	11-21-35	11-50-00
		2600	11-25-00	11-45-00
		2700		
		2800	Dredged 20 min.	
		2900		
		3000		
		3100	9-02-00	48-30
		3200	05-30	39-30
Dredging		3300		
N E.		3400		
		3500		
Position:		3600	Towed 20 min	
10° 15' 11" S.		3700	5 ft. Cone & 2 Kofoids	
95° 40' 48" W.		3800	at 300 fms.	
		3900	cable.	
		4000		

#### SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

#### REMARKS:

Bar. 29.9  
Therm attached 73.7

Franklin

No. *Dr. 4710* Date *30 Dec., 1904.*

Machine. Reel.

Turns Cor.+ Depth

Shot or lead

Bottom *No Soundings.*

Bottom temperature

No. of thermometer Cor.

Corrected temperature

Air *74°* Surface *74°* DriftTrawl or dredge *Surface Haul*

## SOUNDING WIRE.

DOWN.

UP.

## TURNS.

## DREDGE ROPE.

DOWN. *pm.* UP.

*4-ft Surface Net  
with electric lt.  
towing from  
port Tower boom*

0

*out; 1/2;*

100

200

*7:46:00 8:06:00*

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

*and  
The two Kofrids  
aft, as before*

*Lat. 9° 30.5' S.**Long. 95° 08.3' W.**Fairly clear.**Gentle breeze from East**(Moderate Sea.**Bar. 29.88**Therm. At'd. 79°**Course, N.E.*

Lat. 9° 30' 30" S.  
 Long. 75° 08' 18" W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

No. 12711 Date 1904  
 Lucas Machine. Reel. Lucas  
 Turns Cor.+ Depth 2240 fms  
 Shot or lead 60 lb and 5 C. Tubes.  
 Bottom Glob. Oz.  
 Bottom temperature 35.8°  
 No. of thermometer 108026 Cor. 5°  
 Corrected temperature 35.3  
 Air 74° Surface 75° Drift 1/2 mile N.E.  
 Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
01.00	01.15	0	01.30	
02.00	01.15	100	04.45	
03.00	01.15	200	08.00	
04.00	01.15	300	11.15	13-00
05.00	01.05	400	14.15	10-30
06.00	00.50	500	17.20	07-15
07.00	00.35	600	20.25	04-00
08.00	00.25	700	23.45	2 01-00
09.00	00.15	800	27.15	57-40
10.00	00.05	900	30.45	54-20
11.00	00.00	1000	33.55	50-50
12.00	00.00	1100	37.10	47-20
13.00	00.00	1200	40.25	44-10
14.00	00.00	1300	43.40	40-55
15.00	00.00	1400	47.10	37-30
16.00	00.00	1500	50.25	34-20
17.00	00.00	1600	53.55	31-10
18.00	00.00	1700	57.15	27-50
19.00	00.00	1800	12-00-30	24-30
20.00	00.00	1900	04-00	21-00
21.00	00.00	2000	07-20	17-30
22.00	00.00	2100	10-35	13-50
23.00	00.00	2200	13-50	10-10
24.00	00.00	2240	17-00	06-00
		2400	20-30	1-02-25

Lat.  $7^{\circ} 47' 30''$  S.  
 Long.  $94^{\circ} 05' 30''$  W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
	00m.	2500	1-23-42	58-00
I. <i>Intermittent</i>		2600	26-50	
<i>before:</i>		2700	28-11	13-50-00
100 fms. down,		2800	<i>28-11</i>	
with 400 fms. wire		2900	Light breeze from ESE.	
10:03.30	10:58.40	3000	Thru water sea.	
06.50	55.20	3100	29.45	
10.15	57.50	3200	30.15	
13.30	46.05	3300	31.00	
10:16.25	10:44.10	3400	32.00	
300 fms. down		3500		
Towing 20 fms.		3600		
		3700		
		3800		
		3900		
		4000		

# I. SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
Surface	75.10	104922.	-0.3	74.80
25	74.00	109152.	-0.3	73.70
50	62.50	104915.	-0.5	62.00
100	55.50	104914.	-0.6	54.90
200	57.80	108154.	-0.7	57.10
300	46.00	109635.	-0.4	45.60
400	44.00	104924.	-0.6	43.40
500				
600	52.80	108156.	-0.3	52.50
700	38.2			
800	38.2	108157.	-0.3	37.9
900	38.2			
1000				

11-1024

## REMARKS:

Commenced sounding at 9:02:30  
 down at 9:29:00  
 up at 9:34:05  
 Wp at 9:57:00  
 X) *show* *the* *bottom* *at* *10:00:00*



DeLong

P.L. 71.1

Lat. 7° 0' 5" S  
Long. 93° 36' 5" W

11-1023

No. 4712.1

Date 31 Dec/04

Machine. Reel.

Turns Cor.+ Depth

Shot or lead

Bottom No Sounding.

Bottom temperature

No. of thermometer Cor.

Corrected temperature

Air 76° Surface 74° Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
Time		0	4' 10" down	
Time E. S. E.		100	from port	
Time S. E.		200	and S. E. side	
Time	29.90	300	Time	
Time	77.5	400	Time	
		500	P. M.	
		600	Time	
		700	7-11-30 S. E. side	
		800		
		900	Time	
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

Lat.  
Long.

No. 4713 Dr. Date 1 Jan. 1905

Lucas Machine. Reel. Lucas

Turns Cor.+ Depth 3191 faths.

Shot or lead 60 lb. 3/4 T.C. Tubes

Bottom Glob. Co.

Bottom temperature 35.8

No. of thermometer 108026 Cor. 5

Corrected temperature 35.3

Air 77 Surface 73 Drift 71

Trawl or dredge 9

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
	8-54-35	0		
	54-1	100		
	54-1	200		
	54-15	300		
	54-15	400		
	54-20	500	Towed 20 min.	
	54-25	600		
	54-30	700		
	54-35	800		
	54-40	900		
	54-45	1000		
	54-50	1100		
	54-55	1200		
	54-55	1300		
	54-55	1400		
	54-55	1500		
	54-55	1600		
	54-55	1700		
	54-55	1800		
	54-55	1900		
	54-55	2000		
	54-55	2100		
8-26-00	8-28-05	2200		
		2300		
		2400		

Lat. 5.22.07. S.  
 Long. 92.10.24. W. 92.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
Surf	76.5	104888	.2	75.2
15-25	76.5	104888	.2	75.2
30-60	74.4	104914	.8	73.6
50-100	72.7	108156	.4	72.3
70-200	70.5	104934	.4	70.1
100-300	68.2	109635	.3	67.9
125-400	65.0	108155	.6	64.4
150-500	64.4	108157	.6	63.8
600	Tethered down at 9-11-11			
700	100 fathms out at 9-15-11			
800	Tethered down at 9-15-11			
900	Tethered down at 9-25-11			
1000	Water bottle & thermometer attached			

11-1023

REMARKS:

Fairly Clear.  
 Bar 29.94  
 Ther Att. 50.  
 Smooth Sea  
 Light breeze S.W.

PL = 82.6

11-1023

No. *Dr. 4714* Date *1 Jan. 1905*

Machine. Reel.

Turns Cor.+ Depth

Shot or lead

Bottom

*No Sounding.*

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air *76°* Surface *75°* Drift

Trawl or dredge *Surface Haul as before.*

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

*Out In*

*7:45 - 8:05*

*= towing 20 min.*

*Clearing  
S.F.  
Moderate Sea  
Temp. 29.89  
Wind, N.E. 800  
Current, N.E. by N.*

Lat. 4° 19' 00 S  
Long. 78° 28' 30 W

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

P.L. = 97.7

11-1023

No. 4715 Date 2 Jan. 05

Lucas Machine. Reel Lucas

Turns Cor. + Depth 1743

Shot or lead 60 lb J.C.T.

Bottom sh. oz.

Bottom temperature <sup>Probably reading failed for</sup>

No. of thermometer 108026 Cor.

Corrected temperature the reflection for inner tube

Air 77° Surface 75° Drift 1 1/2 mile E.

Trawl or dredge III. 8-ft Trawl on surface

Am. SOUNDING WIRE.

TURNS.

Am. DREDGE ROPE.

DOWN.	UP.		DOWN.	UP.
7:38	9:07.45	0	10:36.40	
58.15		100	-	
59.00	36.00	200	42.25	11:00
60.00	35.05	300	46.50	07:00
61.00	34.15	400	50.05	06:00
62.00	33.30	500	53.51	05:00
63.00	32.20	600	57.25	50:00
64.00	31.25	700	11:01.15	45:00
65.00	30.30	800	04.50	41:00
66.00	29.50	900	08.25	40:00
67.00	28.75	1000	12.00	39:00
68.05	27.75	1100	15.45	38:00
69.05	26.30	1200	18.50	37:00
70.10	25.15	1300	22.30	36:00
71.10	24.10	1400	26.05	35:00
72.15	23.00	1500	29.50	34:00
73.20	21.50	1600	33.40	33:00
74.25	20.30	1700	37.50	32:00
8:17.50	8:10.50	1743	41.20	31:00
2) Drift while sounding.		1800	45.20	30:00
x Struck against bottom		1900	49.40	29:00
Struck, when		2000	53.20	28:00
up, which jarred down		2100	56.00	27:00
the mercury.		2200	59.55	26:00
		2300	11:59.55	55-50
		2400	12:04.00	12-50-00

Lat. 2° 40.4' S.  
 Long. 70° 17.8' W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
II. Intermediate as before.		2500		
		2600	Cloudy.	
		2700	Gentle br., S.E.	
		2800	Smooth Sea.	
		2900	Bar. 30.86	
9:40.00	10:25.10	3000	Therm. att. 82°	
43.15	22.05	3100	Course, E.	
46.20	18.50	3200		
47.00	15.35	3300		
9:51.50	10:12.00	3400		
= towing 20 min.		3500		
at 300 fms. depth with 400		3600		
fms. of wire.		3700		
		3800		
		3900		
		4000		

# I. SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
Surface	25.75°	104822	-.3	25.45°
25	75°	108025x	-.4	74.6°
50	63.2°	104825	-.5	62.7°
100	57°	109635	-.3	56.7°
200	52.2°	108155	-.6	51.6°
300	48.5°	108156	-.6	47.9°
400	44.5°	108154	-.7	43.8°
500				
600	41°	104924	-.6	40.4°
700				
800	38.9°	109151	-.7	38.2°
900	Water became and still colder at bottom			
1000	at end of cable.			

11-1023

## REMARKS:

Started down at 8:45 am.

Five down at 9:10 "

Started back up 9:15 "

Up at 9:37 "

\* with surface from 1000 m.

5 min for pressure.



No. *4715* Date *2 July 1907*Machine. *Reel.*

Turns Cor.+ Depth

Shot or lead

Bottom *No Sounding.*

Bottom temperature

No. of thermometer Cor.

Corrected temperature

Air *76°* Surface *75* DriftTrawl or dredge *Agassiz deep sea net -**surface*

SOUNDING WIRE		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>7:15</i>		0		<i>8.25.30</i>
		100		<i>31.50</i>
		200		<i>28.25</i>
		300		<i>24.50</i>
		400		<i>21.10</i>
		500		<i>8.18.00</i>
		600		<i>8.14.10</i>
		700		
		800	<i>= 20 min</i>	
		900		
		1000	<i>600 fms wire</i>	
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat. 2°18'30" S. ✓  
 Long. 90°02'36" W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>Clear</i> <i>5 m</i> <i>Bar</i> <i>Ther</i>		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

6. 7. 1)

No. *Hx. 4579* Date *Jan'y. 10, '05*  
*Lucas* Machine. Reel. *Lucas*  
 Turns Cor.+ Depth *1385 fms.*  
 Shot or lead *35 lbs. + Tel. Tubes.*  
 Bottom *No specimen*  
 Bottom temperature *36°*  
 No. of thermometer *108026* Cor. *5"*  
 Corrected temperature *35.5*  
 Air *77°* Surface *76°* Drift  
 Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0		
		100		
		200		
		300		
		400		
	<i>39-15</i>	500		
		600		
	<i>36-35</i>	700		
		800		
		900		
	<i>32-05</i>	1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat. 1° 31' S. ✓  
Long. 91° 04' W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

# SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

# REMARKS:

Cloudy  
Lt. breeze from S.W.  
Barometer 29.75"  
Therm. attached 78.5°

No. 4851 Date 11 June 1905

Machine. Reel. Lucas

Turns Cor.+ Depth 1815 fms

Shot or lead 35<sup>lb</sup> and T. C. TubesBottom 565. O<sub>3</sub>.

Bottom temperature 36°

No. of thermometer 108026 Cor. 3

Corrected temperature 35.5

Air 76° Surface 74° Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
10. 00. 00		0		
7. 30		100		
9. 10		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat. 10 46' 48" S.  
Long. 71° 36' 00" W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

No.

Date

Lucas

Machine.

Reel.

Lucas

Turns

Cor. +

Depth 1871

Shot or lead

J. C. T.

Bottom

Og.

Bottom temperature

No. of thermometer

108026

Cor.

Corrected temperature

Air 80°

Surface

75°

Drift

~~Trawl or dredge~~

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
8:02.25	8:45.35	0		
03.05	44.10	100		
03.55	43.00	200		
04.40	41.55	300		
05.30	40.45	400		
06.20	39.40	500		
07.15	38.40	600		
08.10	37.30	700		
09.00	36.25	800		
10.15	35.15	900		
11.00	34.05	1000		
12.00	32.55	1100		
13.00	31.35	1200		
14.00	30.20	1300		
15.00	29.00	1400		
16.05	27.40	1500		
17.10	26.20	1600		
18.15	25.00	1700		
19.20	23.20	1800		
8:20.10	8:22.10	1871		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat. 20° 14' 18" S.  
Long. 92° 29' 54" W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:



No. *Hy. 4823.*Date *11 Janur 0.*

Machine. Reel.

Turns Cor.+ Depth *1924 fms.*Shot or lead *60 lbs. & Sil. Tubes*Bottom *glab. sz.*Bottom temperature *36*No. of thermometer *1700* Cor.Corrected temperature *35.4*Air *80°* Surface *77°* Drift~~Trawl or dredge~~

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>P. 75.</i>				
<i>4-02-00</i>	<i>4-45-10</i>	0		
<i>03-00</i>	<i>44-10</i>	100		
<i>03-45</i>	<i>43-15</i>	200		
<i>04-30</i>	<i>42-15</i>	300		
<i>05-20</i>	<i>41-20</i>	400		
<i>06-15</i>	<i>40-20</i>	500		
<i>07-10</i>	<i>39-20</i>	600		
<i>08-05</i>	<i>38-20</i>	700		
<i>09-00</i>	<i>37-20</i>	800		
<i>10-00</i>	<i>36-15</i>	900		
<i>11-00</i>	<i>35-10</i>	1000		
<i>12-00</i>	<i>33-30</i>	1100		
<i>13-05</i>	<i>32-20</i>	1200		
<i>14-05</i>	<i>31-10</i>	1300		
<i>15-10</i>	<i>30-00</i>	1400		
<i>16-15</i>	<i>28-45</i>	1500		
<i>17-15</i>	<i>27-20</i>	1600		
<i>18-20</i>	<i>26-05</i>	1700		
<i>19-25</i>	<i>24-45</i>	1800		
<i>20-35</i>	<i>23-20</i>	1900		
<i>4-20-50</i>	<i>4-22-50</i>	1924 2000		
		2100		
<i>Drift NW'y.</i>		2200		
		2300		
		2400		

Lat. 2° 42.4' S. ✓  
 Long. 93° 30.1' W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

P.L. 9.3

11-1023

507  
No. 4543 Hy  
Lucas

Date 12 Jan 1905

Machine.

Reel.

Lucas

Turns

Cor.+

Depth 2031 fathoms

Shot or lead 60 lbs. T.C. Tubes

Bottom lt. Glob. Oz.

Bottom temperature 35.9

No. of thermometer 108027

Cor.

6

Corrected temperature 35.3

Air 82° Surface 77° Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
4	3	0		
4	57	100		
4	15	200		
4	2	300		
4	44	400		
4	5	500		
4	10	600		
4	2	700		
4	1	800		
4	27	900		
4	1	1000		
4	1	1100		
4	1	1200		
4	14	1300		
4	1	1400		
4	1	1500		
4	11	1600		
4	1	1700		
4	13	1800		
4	46	1900		
4	2	2000		
4	20	2100		
4	3	2200		
4	3	2300		
4	3	2400		

Lat.  $3^{\circ} 34' 00''$  S.  
 Long.  $78^{\circ} 35' 24''$  W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

No. *Dr. 4717* Date *13 January, 1905*

Lucas Machine. Reel. Lucas.

Turns Cor.+ Depth *2153 fms.*Shot or lead *60 lb and J.C.T.*Bottom *rdk. C. glob. O<sub>3</sub>.*Bottom temperature *35.8°*No. of thermometer *108027* Cor. *6*Corrected temperature *35.2*Air *81°* Surface *75°* Drift East. *3/4 mile*Trawl or dredge *III. Trawling 8' 2 floats, tail net, mud bag.*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
Am. DOWN.	UP.		Am. DOWN.	UP.
<i>8:00.35</i>	<i>8:51.00</i>	0	<i>10:44.10</i>	<i>2-34-00</i>
<i>01.35</i>	<i>50.00</i>	100	<i>47.45</i>	<i>20-15</i>
<i>02.30</i>	<i>49.05</i>	200	<i>51.10</i>	<i>19-00</i>
<i>03.20</i>	<i>48.05</i>	300	<i>54.20</i>	<i>22-20</i>
<i>04.20</i>	<i>47.10</i>	400	<i>57.30</i>	<i>1-15</i>
<i>05.20</i>	<i>46.05</i>	500	<i>11:00.20</i>	<i>15-45</i>
<i>06.15</i>	<i>45.00</i>	600	<i>02.35</i>	<i>12-35</i>
<i>07.10</i>	<i>43.55</i>	700	<i>06.50</i>	<i>0-15</i>
<i>08.10</i>	<i>42.50</i>	800	<i>10.10</i>	<i>0-30</i>
<i>09.10</i>	<i>41.5</i>	900	<i>12.50</i>	<i>2-15-30</i>
<i>10.10</i>	<i>40.40</i>	1000	<i>17.15</i>	<i>1-5-0</i>
<i>11.10</i>	<i>39.10</i>	1100	-	<i>5-45</i>
<i>12.10</i>	<i>37.55</i>	1200	<i>24.15</i>	<i>51-30</i>
<i>13.15</i>	<i>36.46</i>	1300	<i>27.56</i>	<i>48-10</i>
<i>14.20</i>	<i>35.20</i>	1400	<i>31.20</i>	<i>44-15</i>
<i>15.25</i>	<i>34.00</i>	1500	<i>35.15</i>	<i>41-30</i>
<i>16.30</i>	<i>32.35</i>	1600	<i>38.45</i>	<i>38-00</i>
<i>17.30</i>	<i>31.10</i>	1700	<i>42.10</i>	<i>34-40</i>
<i>18.35</i>	<i>29.45</i>	1800	<i>45.40</i>	<i>31-20</i>
<i>19.40</i>	<i>28.20</i>	1900	<i>49.25</i>	<i>27-50</i>
<i>20.45</i>	<i>27.00</i>	2000	<i>53.50</i>	<i>24-10</i>
<i>21.50</i>	<i>25.30</i>	2100	<i>57.30</i>	<i>20-05</i>
<i>22.50</i>	<i>24.30</i>	<i>2153</i> <del>2200</del>	<i>12-00-10</i>	<i>16-10</i>
Wire slightly out of plumb.		2300	<i>03-40</i>	<i>12-20</i>
		2400	<i>07-30</i>	<i>1-00-15</i>

Lat. 50° 10' 18" S }  
 Long. 98° 58' 00" W }

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
II. Intermediate		2500	12-11-10	1-04-30
Haul:		2600	14-30	1-00-40
Robbinet and		2700	17-55	56-30
Two Hybrid.		2800	12-21-00	12-51-00
- One -		2900		
10.06.45	10.40.00	3000	Lined 1000	
10.00	36.50	3100		
13.10	33.45	3200		
16.00	30.30	3300		
10.19.10	10.27.10	3400		
Fet with back 12 min.		3500	Gentle breeze	
Towing 20 min.		3600		
Coral, sand, 0.3 m		3700	Morocco Sea	
(1000 0.5 m)		3800		
		3900	Lar. 1000	
		4000		

# I. SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	76.5	104922.	-.3	76.2
50	76.8	108025.	-.2	76.6
100	69.1	104924.	-.4	68.7
200	65.8	104924.	-.5	65.3
300	55.5	108154.	-.4	55.1
400	47.1	108155.	-.4	46.7
500	44.8	108156.	-.7	44.1
600	40.1	108157.	-.7	39.4
700				
800	38.4	108157.	-.7	37.7
900	Water up and down at 1000 ft.			
1000	x 1000 ft. water glass rose.			

11-1023 x 1000 ft. pressure

## REMARKS:

Starts down at 9.02.30

800 fms. down at 9.33.40

Starts back up at 9.34.40 } 5 min

Up at 10.04.30

507  
De Long

P.L. 661

No.

Date

Machine.

Reel.

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Corrected temperature

Air 76°

Surface 76°

Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN. <i>P.L.</i>	UP.
		0		
		100		
		200		
		300		
		400	<i>7-1-30</i>	
		500		
		600		
		700		
		800		
		900		
		1000	<i>2 H. foia towing</i>	
		1100	<i>aster</i>	
		1200	<i>7-1-30</i>	<i>7-22-0</i>
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

Cloudy



P.L. = 83.3

11-1023

No. 4719 Date 14 January, 1905

Lucas Machine. Reel Lucas

Turns Cor.+ Depth 2285 fms.

Shot or lead 60 lb and J.C.T.

Bottom rd. C. (Mang. Nos.)

Bottom temperature 29.5 (!)

No. of thermometer 108027. Cor.

Corrected temperature

Air 77° Surface 75° Drift E 0.8 m.

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
8.02.10	8.55.00	0		
03.15	53.50	100		
-	52.58	200		
05.10	51.45	300		
06.00	50.40	400		
06.50	49.35	500		
07.45	48.30	600		
08.35	47.25	700		
09.50	46.20	800		
10.25	45.15	900		
11.25	44.05	1000		
12.25	42.55	1100		
13.30	41.45	1200		
14.30	40.30	1300		
15.00	39.15	1400		
16.35	38.00	1500		
17.40	36.40	1600		
18.45	35.25	1700		
19.50	34.05	1800		
21.00	32.50	1900		
22.05	31.25	2000		
23.10	30.00	2100		
24.15	28.35	2200		
25.15	27.15	2300		
		2400		

Lat. 6° 29' 30" S.  
 Long. 101° 14' 12" W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
I. Information as base: (400 fms. wire out)		2500		
		2600	Fairly clear.	
		2700	Light breeze from ESE	
		2800	W. breeze from S.E.	
		2900	Clear, calm.	
9. 01. 45	9. 48. 10	3000	Wind S.W. 8/10	
05. 15	49. 40	3100		
08. 20	51. 10	3200		
11. 30	39. 10	3300		
9. 14. 30	9. 24. 30	3400		
(Towing 70 min.)		3500		
End		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

No. *2* Date *1/1*

Machine. Reel.

Turns Cor.+ Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer *No* Cor.

Corrected temperature

Air Surface *7* DriftTrawl or dredge *Surface Haul*

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

*Webb light attached**fast down**2 1/2 min**bringing up**P. 11**7-4**Towing 20 min**Clear  
Gentle breeze**Therm. attached**SW. 1/4 SW*

Lat. 72° 13' 5" S ✓  
 Long. 102° 31' 5" W

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

11. 07. 00

No. Dr. 4721 Date 15 Jan'y. 05

Lucas Machine. Reel. Lucas

Turns, Cor.+ Depth 2084 fms.

Shot ~~on lead~~ 60 lbs & T.T.

Bottom M. brn. glob. C. (mud &amp; sand)

Bottom temperature 7. 10. ?

No. of thermometer 108026. Cor.

Corrected temperature

Air 79° Surface 75° Drift

Trawl or dredge (1. Serial Temperatures

(2. Intermediate Haul

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
A. 47.			A. 5. P.	
01-55	8-40	0	10-21	1
02-55		100		
03-50	40-55	200	32-50	
04-15	40-55	300	35-10	
05-00	40-55	400	38-10	
06-00	42-55	500	41-20	
07-00	41-55	600	44-30	
07-55	40-55	700	47-30	
08-50	39-55	800	50-40	
09-50	38-55	900	54-10	
10-50	37-40	1000	57-30	
11-50	36-50	1100	11-00-50	
12-50	36-25	1200		
13-50	35-15	1300	07-40	
14-50	33-45	1400	11-20	
15-50	31-45	1500	14-40	
16-45	30-20	1600	16-00	
17-35	29-00	1700	21-40	
18-35	27-40	1800	25-20	
19-30	26-30	1900	28-25	47-30
20-30	25-15	2000	31-40	
8-21-45	8-23-45	2084	35-40	
		2100		
		2200	39-50	
		2300	43-25	
		2400	11-46-40	

5.

*Bredg. course E.*

1.)

Suria,co

REMARKS:

5

J. Long

No. *L. 4722* Date *16 Jan. 05*Machine. *Lucas* Reel. *Lucas*Turns Cor.+ Depth *1923 fms*Shot or lead *6* T.C. TubesBottom *No. Specimen*Bottom temperature *35.8*No. of thermometer *108023*Cor. *0.7*Corrected temperature *35.1*for stem *4*Air *87°* Surface *75°* DriftTrawl or dredge *Intermediate as before*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0		
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat  $9^{\circ}31'00''$  S. ✓  
 Long.  $106^{\circ}30'30''$  W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1024

REMARKS:

11-1024-11-1024



41.9

No. *Dr. 4723* Date *16 Jan. 1905.*

Machine. Reel.

Turns Cor.+ Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer Cor.

Corrected temperature

Air *77°* Surface *76°* DriftTrawl or dredge *Surface haul, as before*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0	<i>out</i>	<i>in</i>
		100	<i>7:30</i>	<i>7:50</i>
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

*Partly clear;  
moonlight.**Lat.  $36^{\circ} 16'$  from E by S.**South Sea.**Bar. 29.88**Therm. at 81°*

Lat. 10° 14' 18" S.  
Long. 107° 45' 30" W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

P.L. = 53.4

11-1023

No. *Dr. 4724* Date *17 Jan. 1905*  
*Lucas* Machine. Reel. *Lucas*.  
 Turns Cor. + Depth *1841 fms.*  
 Shot or lead *60 lb and T.C. Trawl*  
 Bottom *no spec. of bottom, sandy*  
 Bottom temperature *35.8*  
 No. of thermometer *108023* Cor. *7*  
 Corrected temperature *35.7*  
 Air *88°* Surface *79°* Drift *N W. 1 mile*  
 Trawl or dredge *T. (S. 8-f. A. Lucas)*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>8:02.00</i>	<i>8:42.10</i>	0	<i>10:25.45</i>	<i>1-5</i>
<i>03.50</i>	<i>41.15</i>	100	<i>29.25</i>	<i>57.45</i>
<i>04.25</i>	<i>40.10</i>	200	<i>32.30</i>	<i>47.40</i>
<i>05.20</i>	<i>39.20</i>	300	<i>36.45</i>	<i>43.55</i>
<i>06.25</i>	<i>38.20</i>	400	<i>39.00</i>	<i>40.40</i>
<i>07.15</i>	<i>37.20</i>	500	<i>42.05</i>	<i>37.30</i>
<i>08.15</i>	<i>36.20</i>	600	<i>45.20</i>	<i>34.15</i>
<i>09.15</i>	<i>35.20</i>	700	<i>48.40</i>	<i>30.50</i>
<i>10.25</i>	<i>34.20</i>	800	<i>52.30</i>	<i>27.30</i>
<i>11.25</i>	<i>33.15</i>	900	<i>55.55</i>	<i>24.15</i>
<i>12.25</i>	<i>32.15</i>	1000	<i>59.25</i>	<i>21.10</i>
<i>13.15</i>	<i>31.15</i>	1100	<i>11:02.45</i>	<i>17.50</i>
<i>14.20</i>	<i>30.05</i>	1200	<i>06.35</i>	<i>14.20</i>
<i>15.20</i>	<i>29.00</i>	1300	<i>10.00</i>	<i>11.15</i>
<i>16.20</i>	<i>27.45</i>	1400	<i>13.45</i>	<i>08.00</i>
<i>17.15</i>	<i>26.20</i>	1500	<i>17.35</i>	<i>04.45</i>
<i>18.15</i>	<i>25.15</i>	1600	<i>20.45</i>	<i>1-01-20</i>
<i>19.25</i>	<i>-</i>	1700	<i>24.00</i>	<i>12-57-20</i>
<i>20.20</i>	<i>22.45</i>	1800	<i>27.45</i>	<i>53.25</i>
<i>21:19.55</i>	<i>8:21.55</i>	<i>1841</i> 1900	<i>31.15</i>	<i>49.40</i>
		2000	<i>34.45</i>	<i>45.45</i>
<i>No drift while</i>		2100	<i>38.25</i>	<i>42.05</i>
<i>Sounding</i>		2200	<i>41.45</i>	<i>38.00</i>
		2300	<i>44.45</i>	<i>33.30</i>
		2400	<i>11:48.20</i>	<i>12-28-00</i>

Dredged 40 minutes.

Lat. 11° 12' S.  
Long. 100° 31' W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

Clear, with low wind.  
S. Air from 13.4 to 14.4  
S. Air from 14.4 to 15.4  
Bar. 29.90  
Therm. 80.0

II. Intermediate  
as before: (am)  
C. 44.50 10.17.00  
45.00 13.00  
47.00 15.00  
51.00 27.00  
54.00 70.00  
x 55.00 11.00

# I. SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
Surf	77.0	108822.	-.2	76.8
125	76.7	109635.	-.1	76.6
50	76	108151.	-.1	75.9
100	64.9	108156.	-.4	65.3
200	49.2	108155.	-.7	49.9
300	46	104914.	-.7	46.7
400	43	104924.	-.6	43.6
500				
600	39.8	108154.	-.8	40.6
700				
800	37.9	108026.	-.6	38.5
900	Surface	with low and a little		Surface
1000		at end of cable.		

11-1023

## REMARKS:

Commenced at 8:18:00 am.

9:00 am. 8:11:00 } 5 min.

Up at 9:39:30

No. *25*Date *11*

Machine.

Réel.

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air *77°*Surface *77°*

Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0		
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat. 11° 38' 34" S  
 Long. 110° 05' 00" W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

No. *D.*: 4726 Date 18 Jan'y. 05

Lucas Machine. Reel. Lucas

Turns Cor.+ Depth 1700 fms.

Shot or lead 60 lb. lead, 2 ft.

Bottom

Bottom temperature 35.8°

No. of thermometer 108023 Cor. 7

Corrected temperature 35.7

Air 81° Surface 78° Drift NW. 1 mile.

Trawl or dredge Agassiz

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
8-05-10	27-00	0	8-05-10	11-00-00
8-06-00	27-05	100	8-06-00	11-01-00
8-06-50	27-10	200	8-06-50	11-02-00
8-07-40	27-15	300	8-07-40	11-03-00
8-08-30	27-20	400	8-08-30	11-04-00
8-09-20	27-25	500	8-09-20	11-05-00
8-10-10	27-30	600	8-10-10	11-06-00
8-11-00	27-35	700	8-11-00	11-07-00
8-11-50	27-40	800	8-11-50	11-08-00
8-12-40	27-45	900	8-12-40	11-09-00
8-13-30	27-50	1000	8-13-30	11-10-00
8-14-20	27-55	1100	8-14-20	11-11-00
8-15-10	28-00	1200	8-15-10	11-12-00
8-16-00	28-05	1300	8-16-00	11-13-00
8-16-50	28-10	1400	8-16-50	11-14-00
8-17-40	28-15	1500	8-17-40	11-15-00
8-18-30	28-20	1600	8-18-30	11-16-00
8-19-20	28-25	1700	8-19-20	11-17-00
		1800	8-20-10	11-18-00
		1900	8-21-00	11-19-00
		2000	8-21-50	11-20-00
		2100	8-22-40	11-21-00
		2200	8-23-30	11-22-00
		2300	8-24-20	11-23-00
		2400	8-25-10	11-24-00

(the wind)

Set watch to 10 min.

Long. 110-42.2

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

Sdg. - 110-42.2

# SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

# REMARKS:

N.E. - mod. sea.  
 Barometer 29.96"  
 Ther. attached 82°



No. Dr 7

Date

Machine.

Reel.

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air 79°

Surface 77°

Drift

Trawl or dredge

Surface as

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0	7.25.30	7.25.30
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

*Lat. 112-11-9*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

# SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1021

# REMARKS:

Nearly overcast  
Smooth sea  
20 NE

No. 4728

Date 1/1/1900

Machine.

Reel.

Turns

Cor.+

Depth 1055 fath.

Shot or lead 60 lbs. and 2

Bottom

*jammed. R.*

Bottom temperature 36.5

No. of thermometer 10822

Cor.

7

Corrected temperature

34.8 35.3

Air 86°

Surface

Drift

Trawl or dredge

*Special 5 ft. dredge, all 2 butterfly*

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

0

1:06.30

100

1:02.10

200

59.40

300

56.20

400

53.00

500

49.40

600

46.20

700

43.00

800

40.00

900

36.40

1000

33.20

1100

30.00

1200

26.40

1300

23.20

1400

20.00

1500

16.40

1600

1700

1800

1900

2000

2100

2200

2300

2400

*Bottom: Glob. S. few bits of rock.*

*Reel top carried away. Chain but no beam hauling held, not up 24.*

[illegible]

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
	2:48	2600	7-51-00	10-10-00
	Sea	2700	3-20	12-40
		2800	2-10	
		2900	3-20	5-40
		3000		10-01-50
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

## SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25		109635		
50		108155		
100		108154		17
200				
300		104914		
400		108156		
500				
600				
700				
800				
900	Small			
1000				

11-1011

## REMARKS:

[illegible]

F.I. 49.5 (7-30 P.M.) 11-1023

No. *D. 4727* Date *17 Jan 02*  
Machine. Reel.

Turns Cor.+ Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer Cor.

Corrected temperature

Air *77* Surface *77* Drift *1/4 mi S. by E.*Trawl or dredge *500 ft**No Sounding*

## SOUNDING WIRE.

DOWN.

UP.

## TURNS.

## DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

*5' cone Net  
with electric light  
attached from  
port boom  
2 Kofoids #1  
towing astern.**Out 100**100**7-10 7-10**Turns*

Lat. 14° 15' S. ✓  
 Long. 115° 13' W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
Generally cloudy Barometer 29.95 Therm. att. 82°		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

P.L. = 60.5

11-1023

No. *L. 420* Date *20 January, 25*  
*Lucas* Machine. Reel. *Lucas*  
 Turns Cor.+ Depth *1912 fms.*  
 Shot ~~on lead~~ *35 lb and Lucas Engine.*  
 Bottom *no specimen.*  
 Bottom temperature *35.7*  
 No. of thermometer *108023.* Cor. *7*  
 Corrected temperature *35*  
 Air *86°* Surface *70°* Drift *SE 1/2 W. 1.5 m.*  
 Trawl or dredge *intermediate as before.*

## Am SOUNDING WIRE.

## TURNS.

## Am DREDGE ROPE.

DOWN.

UP.

DOWN.

UP.

8:01.00	8:45.10	0	8:50.15	9:41.10
02.00	44.10	100	54.10	9:50.10
02.55	43.20	200	57.10	10:01.20
03.55	42.25	300	9:00.25	27.35
04.55	41.35	400	9:03.30	9:23.55
06.00	40.34	500	= 20 min.	
07.00	39.42	600		
08.10	38.45	700	x started 1/2 hour	
09.15	37.45	800	station started	
10.15	36.45	900	to time	
11.20	35.45	1000		
12.25	34.40	1100		
13.30	33.35	1200		
14.45	32.30	1300		
16.00	31.15	1400		
17.10	30.05	1500		
18.25	28.50	1600		
19.45	27.35	1700		
21.00	26.15	1800		
22.20	24.45	1900		
8:22.30	8:24.30	1912		
		2000		
		2100		
		2200		
		2300		
		2400		

Drift while *8:45*,  
 none

Lat. 15° 06.2' S. 18-07  
 Long. 116° 57.7' W. 117-01.2

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

Fairly clear.  
 Lt. breeze from E. S.  
 (Moderate S.W. wind)  
 Bar. 30.0  
 Therm. at 8.00  
 Comae, 8.57 AM.

# SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:



P.L. 50.00 at 7-30 P.M.

No. Dr. 4731 Date 20 Jan'y. 05

Machine. Reel.

Turns Cor.+ Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer Cor.

Corrected temperature

Air 80° Surface 80° Drift

Trawl or dredge

*Sounding*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0		
		100		
		200	<i>Up</i>	<i>In</i>
		300	<i>7-30-00</i>	<i>7-50-00</i>
		400		
		500	<i>Towing 20 min.</i>	
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

*29.75"**Therm. at*

Lat 15 47.2 S  
 Long 46 22.5 W ✓

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

No. *Dr. 4732* Date *21 Jan'y. 05**Lucas* Machine. Reel. *Lucas*Turns Cor.+ Depth *2012 fms.*Shot or lead *60 lb*Bottom *glob. G.*Bottom temperature 1) *35.9°* 2) *35.4*No. of thermometer *108022* Cor.Corrected temperature *34.8*Air *89°* Surface *79°* DriftTrawl or dredge *2 1/2' - 8' 1/2'*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
	<i>45-15</i>	0	<i>*10-33-10</i>	<i>2-22-00</i>
	<i>44-15</i>	100	<i>37-</i>	
	<i>43-25</i>	200	<i>4-</i>	
	<i>42-30</i>	300	<i>5-0</i>	
<i>4-45</i>	<i>41-35</i>	400	<i>46-</i>	
<i>5-55</i>	<i>40-40</i>	500	<i>49-10</i>	
<i>6-50</i>	<i>39-40</i>	600	<i>52-10</i>	
<i>7-55</i>	<i>38-40</i>	700	<i>54-</i>	
	<i>37-40</i>	800	<i>55-10</i>	
<i>9-50</i>	<i>36-40</i>	900	<i>11-55</i>	
<i>10-55</i>	<i>35-55</i>	1000	<i>16-</i>	
<i>11-10</i>	<i>34-50</i>	1100	<i>0-20</i>	
<i>12-15</i>	<i>33-20</i>	1200	<i>12-40</i>	
<i>13-25</i>	<i>32-10</i>	1300	<i>11-10</i>	
<i>14-35</i>	<i>30-55</i>	1400	<i>20-00</i>	
<i>15-40</i>	<i>29-40</i>	1500	<i>23-30</i>	
<i>16-45</i>	<i>28-25</i>	1600	<i>26-</i>	
<i>17-50</i>	<i>27-10</i>	1700	<i>31-00</i>	
<i>18-55</i>	<i>25-55</i>	1800	<i>34-</i>	
<i>19-50</i>	<i>24-30</i>	1900	<i>38-50</i>	
<i>20-55</i>	<i>23-00</i>	2000	<i>41-20</i>	
<i>8-20-40</i>	<i>8-22-40</i>	2100	<i>44-</i>	
		2200	<i>48-40</i>	
		2300	<i>51-10</i>	
		2400	<i>11-55</i>	

\*Set watch back 11 min.

16°32.5' S. ✓  
119°57.0' W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500	11-42-30	11-42-30
		2600		* 11-42-30
		2700		11-42-30
		2800		11-42-30
		2900	11-42-30	
		3000		
		3100		
		3200		
		3300	2) 11-42-30	11-42-30
		3400		
		3500	9-52-30	10-40-00
		3600		
		3700	53-50	32-30
		3800	10 01-55	28-50
		3900		
		4000		

1.) SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	77.5°	108155	-.2	77.3°
50		10492	-.1	
100	71.0	108156	-.5	
200	52.0	108156	-.7	51.3°
300	45.0	108154	-.1	
400	42.0	108154	-.1	
500				
600		109635	-.1	
700				
800	33.0	108154	-.1	32.9°
900				
1000				

REMARKS:

1) In the sea 800 fms 9-18-00  
29.97 Above up 9-23-00  
84° up  
12-47-10 for 4 min

No. *4733* Date *21 January 1905*  
 Machine. Reel.  
 Turns Cor.+ Depth

Shot or lead

Bottom *No Soundings*

Bottom temperature

No. of thermometer Cor.

Corrected temperature

Air *78°* Surface *80°* Drift

Trawl ~~in dredge~~ *Surface* ~~as shown~~

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>Chart; and</i>		0	<i>28:30</i>	<i>28:30</i>
<i>and</i>		100		
<i>W. Angulus</i>		200	<i>Towing</i>	<i>20 min.</i>
<i>Lt. Broderick</i>		300		
<i>separate</i>		400		
<i>Time 29.94</i>		500		
<i>therm 81°</i>		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat. 16° 57.4' S. ✓  
Long. 120° 44' W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

# SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

No. *Dr. 4734* Date *22 Jan. 05.*

Machine. Reel.

Turns Cor.+ Depth *2019 fath*Shot or lead *60 lb. and*Bottom *No specimen.*Bottom temperature *(33.5 - 10.1) (34.5 - 10.2)*No. of thermometer *109633* } Cor. *6*Corrected temperature *34.9*Air *88°* Surface *81°* DriftTrawl or dredge *Intermediate as before*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>0 45</i>	<i>45-00</i>	0	<i>55-40</i>	<i>41-00</i>
<i>1-35</i>	<i>45-00</i>	100	<i>56-30</i>	<i>37-45</i>
<i>2-20</i>	<i>44-00</i>	200	<i>57-45</i>	<i>34-30</i>
<i>3-15</i>	<i>43-05</i>	300	<i>9-3-20</i>	<i>30-50</i>
<i>4-10</i>	<i>42-10</i>	400	<i>0-6-40</i>	<i>9-26-40</i>
<i>5-05</i>	<i>41-15</i>	500	<i>Towed 20 minutes.</i>	
<i>6-00</i>	<i>40-10</i>	600		
<i>6-50</i>	<i>39-10</i>	700		
<i>7-45</i>	<i>38-10</i>	800		
<i>8-45</i>	<i>37-10</i>	900		
<i>9-40</i>	<i>36-05</i>	1000		
<i>10-40</i>	<i>35-00</i>	1100		
<i>11-40</i>	<i>33-50</i>	1200		
<i>12-40</i>	<i>32-40</i>	1300		
<i>13-45</i>	<i>31-30</i>	1400		
<i>14-50</i>	<i>30-10</i>	1500		
<i>15-55</i>	<i>28-50</i>	1600		
<i>17-00</i>	<i>27-30</i>	1700		
<i>18-10</i>	<i>26-10</i>	1800		
<i>19-10</i>	<i>24-45</i>	1900		
<i>20-20</i>	<i>23-15</i>	2000		
<i>21-20</i>	<i>22-10</i>	2100		
		2200		
		2300		
		2400		

Lat 17° 36.0' S.  
 Long. 122° 14.8' W. 35.6

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

# SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

# REMARKS:

Light breeze  
 Bar. 29.95  
 Therm. 85



P.L. = ~~92~~ 97.8

11-1023

No. Dr. 4735. Date 22 Jan. 1905.

Machine. Reel.

Turns Cor.+ Depth

Shot or lead

Bottom No Sounding.

Bottom temperature

No. of thermometer Cor.

Corrected temperature

Air 81° Surface 81° Drift

Trawl or dredge: Surface Haul as before, =

SOUNDING WIRE.		TURNS.	<del>DRENCH WIRE.</del>	
DOWN.	UP.		DOWN.	UP.
4-ft. Cone Net, with electric lt., from port lower boom, and Two Kofoids tow- ing astern.		0	Out,	In:
		100	7:30	7:50
		200		
		300		
		400	= Towing 20 min.	
		500		
		600		
		700		
		800		
		900		
Fairly clear. Lt. breeze from E by N. Moderate Sea. Bar. 29.93 Therm. at. 83° Course, S. 57° W.		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat. 18° 16' S ✓  
 Long. 123° 34' W

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

No. *Dr. 4736.* Date *23 Jan. 05.*Locas Machine. Reel. *Locas*Turns Cor.+ Depth *2284 fms.*Shot ~~and~~ *60 lb with Snapper*Bottom *no calcareous or siliceous matter clay*Bottom temperature *35.5°*No. of thermometer *108023.* Cor. *7*Corrected temperature *34.8°*Air *90°* Surface *81°* DriftTrawl or dredge *I. Serial**II. Intermediate**III. Surface*

## SOUNDING WIRE.

## TURNS.

## DREDGE ROPE.

DOWN. *am.* UP.

DOWN.

UP.

<i>8.02.40</i>	<i>8.55.25</i>	0	<i>10.41.30</i>	<i>2-36-00</i>
<i>02.55</i>	<i>54.15</i>	100	<i>45.05</i>	<i>33-00</i>
<i>04.30</i>	<i>52.25</i>	200	<i>48.00</i>	<i>30-00</i>
<i>05.20</i>	<i>52.20</i>	300	<i>51.25</i>	<i>27-00</i>
<i>06.05</i>	<i>51.70</i>	400	<i>54.30</i>	<i>24-30</i>
<i>06.55</i>	<i>50.70</i>	500	<i>57.30</i>	<i>20-25</i>
<i>07.45</i>	<i>49.75</i>	600	<i>11.04.05</i>	<i>17-10</i>
<i>08.40</i>	<i>48.15</i>	700	<i>04.30</i>	<i>14-15</i>
<i>09.35</i>	<i>47.10</i>	800	<i>07.30</i>	<i>11-00</i>
<i>10.30</i>	<i>46.10</i>	900	<i>11.30</i>	<i>7-30</i>
<i>11.20</i>	<i>45.00</i>	1000	<i>15.05</i>	<i>4-40</i>
<i>12.20</i>	<i>44.55</i>	1100	<i>18.40</i>	<i>3-11-00</i>
<i>13.20</i>	<i>42.40</i>	1200	<i>22.05</i>	<i>56-30</i>
<i>14.15</i>	<i>41.30</i>	1300	<i>25.40</i>	<i>53-30</i>
<i>15.15</i>	<i>40.10</i>	1400	<i>29.10</i>	<i>50-00</i>
<i>16.15</i>	<i>38.25</i>	1500	<i>32.00</i>	<i>46-30</i>
<i>17.20</i>	<i>* 36.50</i>	1600	<i>36.25</i>	<i>43-00</i>
<i>18.25</i>	<i>35.50</i>	1700	<i>39.30</i>	<i>40-00</i>
<i>19.25</i>	<i>34.10</i>	1800	<i>42.45</i>	<i>36-30</i>
<i>20.25</i>	<i>32.50</i>	1900	<i>45.00</i>	<i>33-40</i>
<i>21.30</i>	<i>31.30</i>	2000	<i>48.15</i>	<i>30-10</i>
<i>22.35</i>	<i>30.05</i>	2100	<i>52.20</i>	<i>27-30</i>
<i>23.40</i>	<i>28.45</i>	2200	<i>56.20</i>	<i>24-30</i>
<i>9. 24.40</i>	<i>8.26.40</i>	<i>2300</i>	<i>12-00-10</i>	<i>18-20</i>
		2400	<i>04-00</i>	<i>2-14-30</i>

\* *Reel fouled on reel:**1.5 to 1.75.*\*\* *= flocculent stuff.*

Lat. 19° 00' 25" S. ✓  
 Long. 125° 05' 24" W. ✓

SOUNDING WIRE. <i>f</i>		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500	12-07-15	2-10-40
		2600	10-15	01-00
<i>Intermediate as before:</i>		2700	15-30	2-00
		2800	16-50	3-00
		2900	20-30	1-00
		3000	22-30	1-54-30
0.54.25	12.37.00	3100		
10.52.40	33.45	3200		
0.54.30	30.00	3300		
08.45	26.00	3400		
10.12.30	10.22.30	3500		
<i>Reeled back 1000.</i>		3600		
		3700		
		3800		
		3900		
		4000		

# I. SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
Surf.	81.2	108025	-.2	81.0
25	78.9	104910	-.3	78.6
50	75.0	108152	-.3	74.7
100	72.1	108155	-.4	71.7
200	67.0	108157	-.6	66.4
300	44.9	108154	-.8	44.1
400	41.9	104924	-.7	41.2
500				
600	39.5	109635	-.6	38.9
700				
800	37.4		-.6	37.0
900	Faint amp and Therm. record.			
1000				

## REMARKS:

Started down at 9:01.50 am.

Down at 9:25.40 } = 5 min.

Starts up at 9:30.40

Up at 9:30.40

Bottom: mud, sh. & M. spec. fine. (large haul)

No. *Dr. 4737* Date *24 Jan'y. 05*  
*Lucas* Machine. Reel. *Lucas*  
 Turns Cor.+ Depth *2060 fms.*  
 Shot or lead *60 lbs. & Snapper*  
 Bottom *rd. C. & glob. Oy.*  
 Bottom temperature *35.5*  
 No. of thermometer *108023* Cor. *7*  
 Corrected temperature *34.5*  
 Air *93°* Surface *81.5°* Drift  
 Trawl or dredge *Lucas I, II, III*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>8-01-00</i>	<i>46-50</i>	<i>0</i>	<i>18-57-30</i>	<i>9-46-30</i>
<i>01-50</i>	<i>45-45</i>	<i>100</i>	<i>9-01-10</i>	<i>42-20</i>
<i>02-40</i>	<i>44-50</i>	<i>200</i>	<i>04-25</i>	<i>38-30</i>
<i>03-35</i>	<i>43-55</i>	<i>300</i>	<i>07-40</i>	<i>35-00</i>
<i>04-30</i>	<i>43-00</i>	<i>400</i>	<i>9-11-00</i>	<i>9-31-00</i>
<i>05-20</i>	<i>42-00</i>	<i>500</i>	<i>5' Cone Net with</i>	
<i>06-15</i>	<i>41-00</i>	<i>600</i>	<i>2 Kofoids attached</i>	
<i>07-10</i>	<i>40-05</i>	<i>700</i>	<i>2 Kofoids attached</i>	
<i>08-05</i>	<i>39-00</i>	<i>800</i>	<i>2 Kofoids attached</i>	
<i>09-00</i>	<i>37-55</i>	<i>900</i>	<i>with 400 fms. cable.</i>	
<i>10-00</i>	<i>36-50</i>	<i>1000</i>	<i>Towed 20 min.</i>	
<i>11-00</i>	<i>35-45</i>	<i>1100</i>		
<i>12-00</i>	<i>34-35</i>	<i>1200</i>		
<i>13-05</i>	<i>33-25</i>	<i>1300</i>		
<i>14-05</i>	<i>32-10</i>	<i>1400</i>		
<i>15-10</i>	<i>30-50</i>	<i>1500</i>		
<i>16-10</i>	<i>29-40</i>	<i>1600</i>		
<i>17-15</i>	<i>28-25</i>	<i>1700</i>		
<i>18-20</i>	<i>27-10</i>	<i>1800</i>		
<i>19-25</i>	<i>25-50</i>	<i>1900</i>		
<i>20-30</i>	<i>24-40</i>	<i>2000</i>		
<i>8-21-15</i>	<i>8-23-15</i>	<i>2060</i>		
		<i>2100</i>		
		<i>2200</i>		
		<i>2300</i>		
		<i>2400</i>		

11-1023 57.5  
127.02

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800	Peterson Autos. Closing Net	
		2900		
		3000	10-7-30	10-46-20
9-54-30	9-54-45	3100	11-25	43-15
		3200	15-10	40-10
		3300	19-10	37-10
		3400	23-10	33-50
hove up again to find out		3500	27-05	31-00
what depth it is		3600	10-28-55	10-28-55
for apparatus to close net		3700		
(Lowered to a depth		3800	and hove up again	
of 150 fms. net will close.)		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

#### REMARKS:

Clear

Smooth sea 0

Barometer 29.86"

Therm. attached 84°

De Long

No. Dr. 4758

Date 24 June 1857

Machine.

Reel.

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air 82°

Surface 81°

Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN. P.M.	UP.
		0	Out	In
		100		
		200		
		300	Towed 20 minutes.	
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat, 20° 26.5' S.  
Long, 128° 30.2' W. ✓

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

# REMARKS:

Fair

Light Breeze N.W.  
Bar 29.81



507  
DeLong

PL. 25-8

11-1023

4825

No. ~~4825~~ 4825 Date ~~25~~ 25

Machine. Reel.

Turns Cor.+ Depth 2197 fath

Shot or lead 60 lb

Bottom sd C & glob. Dr.

Bottom temperature 35.2°

No. of thermometer 108028 Cor.

Corrected temperature 54.0

Air 85° Surface 80° Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0		
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		<del>2200</del>		
		2300		
		2400		

Lat. 21° 24' N. Long. 130° 10.3' W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

# SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

A.C. = 8.3

11-1023

No. *49 4525* Date *Jan 25 1902*  
*Lucas* Machine. Reel. *Lucas*  
 Turns Cor.+ Depth *2123 fms.*  
 Shot or lead *60 lb. with Snapper*  
 Bottom *rd. C.*  
 Bottom temperature *35.5*  
 No. of thermometer *108023.1* Cor.  
 Corrected temperature *34.1*  
 Air *79°* Surface *80°* Drift  
 Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>02.15</i>	<i>7.50.55</i>	0		
<i>03.20</i>	<i>49.55</i>	100		
<i>04.10</i>	<i>48.55</i>	200		
<i>05.00</i>	<i>47.55</i>	300		
	<i>46.55</i>	400		
	<i>45.55</i>	500		
<i>07.15</i>	<i>44.55</i>	600		
<i>08.25</i>	<i>43.55</i>	700		
<i>09.30</i>	<i>42.50</i>	800		
<i>10.30</i>	<i>41.55</i>	900		
<i>11.30</i>	<i>40.45</i>	1000		
<i>12.30</i>	<i>39.25</i>	1100		
<i>13.30</i>	<i>38.20</i>	1200		
<i>14.35</i>	<i>37.10</i>	1300		
<i>15.40</i>	<i>36.00</i>	1400		
<i>16.45</i>	<i>34.40</i>	1500		
<i>17.50</i>	<i>33.25</i>	1600		
<i>19.00</i>	<i>32.10</i>	1700		
<i>20.05</i>	<i>30.40</i>	1800		
<i>21.10</i>	<i>29.20</i>	1900		
<i>22.20</i>	<i>27.55</i>	2000		
<i>23.30</i>	<i>26.20</i>	2100		
<i>7.28.45</i>	<i>7.25.45</i>	<i>2123</i>		
		<del>2200</del>		
		2300		
		2400		

Lat. 21° 36.1' S.  
Long. 131° 25.2' W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

No. *D. 4-59* Date *26 Jan. 05*

Lucas Machine.

Reel *Lucas*

Turns

Cor. +

Depth *2042 fms.*Shot or lead *60 lb Snapper*Bottom *dk. gy. glob. Oz.*Bottom temperature *55.6*No. of thermometer *108023*

Cor.

Corrected temperature *34.9*Air *81°*Surface *79°*

Drift

Trawl or dredge *III**5 1/2-ft. Rigs (bottom)*

## SOUNDING WIRE.

DOWN. *Am.* UP.

## TURNS.

## DREDGE ROPE.

*Am.* DOWN.

UP.

<i>9:01.15</i>	<i>8:45.0</i>	0	<i>10:29.15</i>	<i>2:46.00</i>
<i>02.15</i>	<i>44.25</i>	100	<i>32.45</i>	<i>38.00</i>
<i>04.00</i>	<i>42.25</i>	200	<i>36.00</i>	<i>34.00</i>
<i>05.50</i>	<i>40.40</i>	300	<i>39.00</i>	<i>30.00</i>
<i>07.40</i>	<i>38.45</i>	400	<i>42.00</i>	<i>26.00</i>
<i>09.30</i>	<i>36.50</i>	500	<i>45.30</i>	<i>22.00</i>
<i>11.20</i>	<i>34.55</i>	600	<i>49.15</i>	<i>18.00</i>
<i>13.10</i>	<i>32.55</i>	700	<i>52.30</i>	<i>14.00</i>
<i>15.00</i>	<i>30.55</i>	800	<i>55.40</i>	<i>10.00</i>
<i>16.50</i>	<i>28.55</i>	900	<i>58.15</i>	<i>06.00</i>
<i>18.40</i>	<i>26.55</i>	1000	<i>11:02.50</i>	<i>02.00</i>
<i>20.30</i>	<i>24.55</i>	1100	<i>06.35</i>	<i>58.00</i>
<i>22.20</i>	<i>22.55</i>	1200	<i>08.55</i>	<i>54.00</i>
<i>24.10</i>	<i>20.40</i>	1300	<i>12.00</i>	<i>50.00</i>
<i>26.00</i>	<i>18.35</i>	1400	<i>15.10</i>	<i>46.00</i>
<i>27.50</i>	<i>16.35</i>	1500	<i>18.20</i>	<i>42.00</i>
<i>29.40</i>	<i>14.30</i>	1600	<i>21.30</i>	<i>38.00</i>
<i>31.30</i>	<i>12.25</i>	1700	<i>24.05</i>	<i>34-00</i>
<i>33.20</i>	<i>10.20</i>	1800	<i>26.40</i>	<i>30-25</i>
<i>35.10</i>	<i>08.10</i>	1900	<i>29.30</i>	<i>26-30</i>
<i>37.00</i>	<i>06.05</i>	2000	<i>32.00</i>	<i>22-00</i>
<i>38.50</i>	<i>04.00</i>	<i>2042</i>	<i>34.30</i>	<i>18-00</i>
<i>40.40</i>	<i>01.55</i>	<i>2100</i>	<i>37.00</i>	<i>14-00</i>
<i>42.30</i>	<i>00.00</i>	2200	<i>40.00</i>	<i>10-00</i>
<i>44.20</i>	<i>58.00</i>	2300	<i>43.00</i>	<i>06-00</i>
<i>46.10</i>	<i>56.00</i>	2400	<i>46.00</i>	<i>02-00</i>
<i>48.00</i>	<i>54.00</i>		<i>49.00</i>	<i>11-30</i>

*Q: 71.05 S: 72.45*  
*with sat. and rd. chains*  
*Sinking 2 fms. 4000, 2*  
*trawls; mud bag.*

Lat. 133° 21' 15"

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500	11.52.40	1.00.00
II. Intermediate No. 1000 am.		2600	5.00.00	4.50.00
		2700	12.00.00	3.50.00
		2800	04.00.00	3.00.00
		2900	1.00.00	2.00.00
9.48.50	10.25.00	3000	Cloudy, 11.11.45	
51.50	22.00	3100	Cloudy, 11.11.45	
54.45	19.50	3200	2.00.00	1.00.00
57.45	14.45	3300	3.00.00	0.00.00
10.00.50	10.10.50	3400	Rev. 24.77	
Sid. water, 10 minutes		3500	Therm. 84°	
= forced 20 min.		3600		
		3700	* Heavy ship	
		3800		
		3900		
		4000		

# I. SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	79.8	108025	-.2	79.6
50	75.0	108025	-.2	74.8
100	69.0	104914	-.3	68.7
200	57.0	108025	-.5	56.5
300	45.2	108025	-.6	44.6
400	42.2	108151	-.7	41.5
500	?			
600	39.9	108025	-.5	39.4
700				
800	35.0	108025	-.6	34.4
900	Water, Cor. and Kaffir			
1000	Bottom 1000, down 1000, 10.00.00			

11-1023

REMARKS:

De 48  
 No. 4686 Date 27 June 1880  
 Machine. Reel.  
 Turns Cor.+ Depth 2070  
 Shot or lead 60 lbs & 2000  
 Bottom Light G. Glob. cor.  
 Bottom temperature 35.3  
 No. of thermometer 108023 Cor. - 1  
 Corrected temperature 34.3  
 Air 78 Surface 78 Drift  
 Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0		
	1-1	100		
	1-2	200		
	1-3	300		
	1-4	400		
	1-5	500		
	1-6	600		
	1-7	700		
		800		
		900		
	2-1	1000		
	2-2	1100		
		1200		
		1300		
		1400		
	1-1	1500		
		1600		
		1700		
		1800		
	1-1	1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat.  $22^{\circ}55.3'S.$  ✓  
 Long.  $134^{\circ}48.6'W.$

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP. °.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:



P.L. = 9.3

11-1023

No. *44527* Date *5 February 1905*  
*Lucas* Machine. Reel. *Lucas*  
 Turns Cor.+ Depth *225 fms.*  
 Shot or lead *35 lb and Snapper*  
 Bottom *Coral*  
 Bottom temperature *54.0*  
 No. of thermometer *108023* Cor.  
 Corrected temperature *53.5*  
 Air *77°* Surface *77°* Drift  
 Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>9:52.00</i>	<i>1:57.15</i>	0		
<i>2.20</i>	<i>58.15</i>	100		
<i>54.00</i>	<i>59.15</i>	200		
<i>4:50.00</i>	<i>0:57.15</i>	<i>225</i>		
		<del>300</del>		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat. 11° 00' N. Long. 171° 00' E. X  
 Long.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
L.A. = r.t. Kamaka Id.		2500	r.t. Aka-Mam	
		2600	41° 55'	
r.a. = r.t. Aka-Mam		2700	to r.t. Au Kana	
		2800	33° 08'	
		2900		
"Reef was app. 1/2 mile from ship. so that plotting reef base on chart of 2024 in the same is plotted respect".		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

# SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	Position: Left angle, right tang. Ka- maka Id. to r.t. Aka-Mam Id., 41° 55'			
50				
100				
200	Right angle, r.t. Aka-Mam Id. to r.t. Au Kana Id., 33° 08'.			
300				
400				
500	111 fath bearing N 60° 2' W true. 7.7 min. S.H.O. 2024, 495. (Answer corrected to to 1895.)			
600				
700				
800				
900				
1000				

11-1023

# REMARKS:

2027-7 for the same day  
 2027-7 for the same day  
 2027-7 for the same day

P.L. = 15.3

11-1023

No. 4528 Date 5 February 1905  
 Machine. Reel. Lucas  
 Turns Cor.+ Depth 245 Fms.  
 Shot or lead 60 lb and Snapper  
 Bottom cracking Bottom, Pec. bk. Sh.  
 Bottom temperature 50.9°  
 No. of thermometer 108023 Cor. 5  
 Corrected temperature 50.4  
 Air 78° Surface 77° Drift  
 Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
10:43:40	10:50.20	0		
44.40	149.25	100		
45.40	48.20	200		
10:46.10	10:47.05	<del>300</del>		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat.

Long.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
R.A. = r. peak of <i>Manga Rava Id</i>		2500		
L. or west peak of <i>An Kera Id</i>		2600		
		2700		32° 20'
		2800		
L.A. = L. or west peak of <i>An Kera</i>		2900		
to L.t. <i>Kanaka Id.</i>		3000		30° 29'
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

## SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	Position:			
50	R.A. - r. peak of <i>Manga Rava Id.</i>			
100	to L. or West peak of <i>An Kera Id.</i>			
200	32° 20'			
300	L.A. - L. or West peak of <i>An Kera Id.</i>			
400	to L.t. <i>Kanaka Id.</i> , 30° 29'.			
500				
600	M. S. - S 77½ W. line.			
700	7.6 mi. (N.O. 2024.)			
800	Sun 45° 27'			
900				
1000				

11-1023

REMARKS:

No. *Hy. 4529* Date *5 July 1905*

Machine. Reel.

Turns Cor.+ Depth *241 fms.*Shot or lead *60 lb* & *Snapper*Bottom *Hard - no specimen.*Bottom temperature *52°*No. of thermometer *108023* Cor. *5*Corrected temperature *51.5*Air *78°* Surface *77°* Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>11:35.10</i>	<i>11:40.10</i>	0		
<i>36.10</i>	<i>39.10</i>	100		
<i>35.30</i>	<i>38.10</i>	200		
<i>11:35.50</i>	<i>11:37.50</i>	<i>241</i> <del>300</del>		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
R.A. =	<del>r. to l.t. Makaka Id.</del>	2600	R.A. =	<del>30° 57' 30"</del>
		2700		30° 57' 30"
L.A. =	l.t. on Makaka Id.	2800	R.A. =	
	peak of Makaka Id.	2900		24° 54'
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	Position:			
50	R.A. - r. to l.t. (Yanga Rara Id.,			
100	30° 57' 30"			
200	L.A. - l.t. (Yanga Rara Island			
300	to peak of Kamaka Id.,			
400	24° 54'			
500				
600	MIT 2.5 fms S 48° W. - 1.5 min			
700				
800				
900				
1000				

11-1023

REMARKS:

P.L. 23.8

No. Hy. ~~4530~~ 4831. Date 5 Feb. 05

Lucas Machine. Reel. Lucas

Turns Cor.+ Depth 1394 fms.

Shot or lead 35 lbs. 4 Snappers

Bottom Co. S.

Bottom temperature 35.7°

No. of thermometer 108023 Cor. 7

Corrected temperature 35

Air 78° Surface 77.5 Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
12-13-15	12-45-30	0		
14-15	44-25	100		
15-15	43-30	200		
16-15	42-35	300		
17-15	41-40	400		
18-15	40-45	500		
19-20	39-50	600		
20-25	38-55	700		
21-30	37-40	800		
22-50	36-40	900		
23-00	35-35	1000		
24-10	34-30	1100		
25-15	33-05	1200		
26-15	31-50	1300		
27-20	30-50	1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

*Lgt.*  
*Lgt.*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

# SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	<i>Position:</i> <i>R. A. - 1. to L. L. (Yanga River Id.,</i> <i>15° 46'</i>			
50				
100				
200	<i>L. A. - L. L. (Yanga River Id., L.</i> <i>L. or Eastern Peak on (Au Kana Id.,</i> <i>23° 10' 40".</i>			
300				
400				
500				
600				
700	<i>Mid. diff. - 5 42 1/2 - 100</i> <i>8 m</i> <i>1000. 20 m</i> <i>1000 42 24</i>			
800				
900				
1000				

11-1023

REMARKS:



Veith

P. L. 90.3

4832.

No. Hy. 4531

Date 6 Feby. 05

Lucas

Machine.

Reel. Lucas

Turns

Cor.+

Depth 2225 fms

Shot or lead 60 lbs. &amp; Snapper

Bottom rd. C.

Bottom temperature 35.7°

No. of thermometer 108023 Cor. 7

Corrected temperature 35

Air 80° Surface 79° Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
A. M.				
8-02-30	8-52-00	0		
3-20	51-00	100		
4-10	50-05	200		
5-00	49-15	300		
5-50	48-20	400		
6-45	47-25	500		
7-40	46-25	600		
8-35	45-25	700		
9-30	44-25	800		
10-30	43-25	900		
11-25	42-20	1000		
12-25	41-15	1100		
13-25	40-10	1200		
14-30	39-05	1300		
15-30	37-55	1400		
16-35	36-40	1500		
17-40	35-25	1600		
18-50	34-10	1700		
19-55	32-50	1800		
21-00	31-35	1900		
22-10	30-15	2000		
23-20	28-50	2100		
24-30	27-25	2200		
8-24-50	8-27-00	2225		
		2400		

21 - 04.5 S.  
133 - 01.2 W.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		2500		
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

#### SERIAL TEMPERATURES

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

11-1023

REMARKS:

$10^{\circ} 17.7' S$   
 $107^{\circ} 50.4' W.$  } 8 p

~~69~~

$24 \frac{20}{72}$   
 $\frac{18}{18}$

$11 \frac{43}{10-58}$   
 $\frac{45}{45}$

63 1/2 miles from

moon pos. is

the 7<sup>30</sup> pm timing =

$10^{\circ} 14.3' S$   
 $107^{\circ} 45.5' W.$

$5.25$   
 $\frac{24}{1000}$   
 $\frac{65-0}{78}$

$\frac{55}{28}$   
 $\frac{27}{27}$

$24 \frac{24}{72}$   
 $\frac{120}{72}$   
 $\frac{84.960}{60}$   
 $\frac{18}{18}$   
 $1-24$

$\frac{12}{7}$   
 $\frac{840}{1400}$   
 $\frac{840}{560}$

$1.18$   
 $\frac{10-25}{12.25}$   
 $\frac{11.42}{11.49}$

Per Thur. ~~4717~~ 4711

2.27.07

92 53 36"

32.5

Dr 4721

Sig. rec - <sup>0.23</sup> 3

Snapper +35	27 st.	but failed	Stunners
" +60	17	"	" 24
Dulles +35	12	"	" 1
" +60	34	"	" 3
	88	"	9
	88		

34-35 shot exp -

54-60 " " - 2 + 1 =

53

up to Feb 5 -